

COLONY OF THE GAMBIA.

**Annual Report of the Department of Agriculture,
for the year ending 31st May, 1943.**

This is the fourth war-time report and it is again presented in an abridged form; full meteorological statistics are omitted and figures for production are confined to those of the year under review.

SECTION 1.

Agriculture in the Colony and Protectorate.

Meteorology.

1. Weather.—Total rainfall for the season closely approximated to the mean fall for previous years, representative figures for Cape St. Mary on the coast and Yoroberi-kunda inland being:—

	Rainfall 1942.	Mean Rainfall Previous seasons.
Cape St. Mary ...	47.02 ins.	47.00 ins.
Yoroberi-kunda ...	39.20 ins.	39.58 ins.

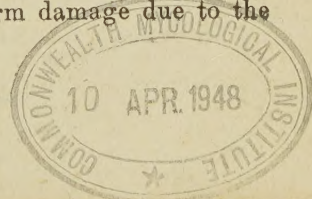
2. Light rains in July were followed by exceptionally heavy rains in August of 26.78 ins. at Cape St. Mary and 19.56 ins. at Yoroberi-kunda. In spite of one half of the year's total falling in the one month, distribution during the remainder of the season was good and in particular, the few light rains experienced throughout October were very valuable for the maturation of the rice crop and the main late-crop dry grains.

Food Crops.

3. *General.*—Production was on an increased scale throughout the Protectorate. Intensive propaganda based on the urgent necessity for self-sufficiency in the matter of food supplies resulted in increased acreages and with the well distributed late rains, the greater part of the Protectorate was able to record bumper harvests. These resulted in true surpluses being available to meet the needs of Bathurst and its environs which are largely unproductive in so far as the staple foods are concerned.

4. Some 3,000 tons of grain, mostly millets, were brought to Bathurst under the controlled Government purchasing scheme, the producer receiving 1d. per lb. for millet and 3d. per lb. for cleaned rice.

5. *Dry grains.*—Yields of the early grain crops were adversely affected by the light rains up to July. The main crop of the later maturing varieties gave excellent yields in spite of localised storm damage due to the heavy August rains.



6. *Rice*.—Increased acreages produced heavy crops in the true rice growing areas of the middle river. Elsewhere, light rains depressed the yield of the early dryland plantings and in the Upper River, where at Basse one of the lowest floods experienced was recorded, the mid-season varieties failed.

7. *Vegetable Production*.—Dry season gardening for vegetable production again showed an increase. Except for occasional glut periods, increased production was largely masked by the ever growing and seemingly insatiable demand. Temperate vegetables are slowly finding their way into the native dietary; turnips, carrots, onions, lettuce and chinese cabbage being most popular in this respect and taking their place with the already established tomatoes and shallots.

Export Crops.

8. *Groundnuts*.—Export production for the 1942-43 season was just over 21,000 tons of undecorticated nuts, only a small improvement on the record 'low' crop of the previous season. With depleted man-power, production was naturally affected by the success of the grow-more-food campaign and, in addition, only a very small number of strange farmers came into the Gambia.

9. The buying season opened on November the 27th, the fixed price being £6 per ton of undecorticated nuts at Bathurst and £5 10 0 at all other buying stations, the difference being the flate-rate transport differential. These prices compared with £4 10 0 and £4 respectively in 1941-42.

10. The whole of the crop was purchased as undecorticated nuts, decortication of as much of the crop as possible being carried out by machinery after purchase.

11. The following quantities of groundnuts were exported during the calendar year 1942:—

Undecorticated nuts	...	...	10,928 tons valued at £65,039
Decorticated nuts	...	...	4,735 tons valued at £48,170
Total value			£113,209

12. *Palm Kernels*.—Collection of this product has shown a decline. Reasons for the drop in production are variously due to an increase in the palm wine trade, increased local use of palm kernel oil and the ease with which youths previously engaged in cutting palm fruit can obtain more lucrative employment.

13. Export of palm kernels for the calendar year 1942, which included a quantity remaining unshipped from the previous year, were as follows:—

Palm Kernels 584 tons valued at £4,735.

14. *Beeswax*.—The raw product was purchased as rough wax at a price of 3d. per lb., its purity averaging some 20% clean wax. Exports during the calendar year 1942 were:—

Beeswax 32,628 lbs. valued at £2,164.

15. Shortage of consumer goods, with consequent lack of incentive for production, rather than the level of the cash price offered, affects the output of this and other minor commodities.

16. *Hides and Skins*.—From a nil return in 1941, 573 cwts. valued at £1,195 were exported in 1942.

Pests and Diseases.

17. With the exception of a few swarms of the Desert Locust—*Schistocerca gregaria*—reported in December, crop diseases and pests were almost entirely absent.

SECTION II.

Work of the Department of Agriculture.

18. Work during the year was based on the approved statement of policy for the department detailed in previous reports with the emphasis continuing on the first section thereof namely—

‘Self-sufficiency in the matter of food production coupled with an improvement in nutrition by the provision of a balanced and more varied diet.’

Food Production.

19. *Rice*.—In June and July, 1942, two officers of the Sierra Leone Department of Agriculture visited the Gambia to report on the possibilities of increased and improved rice production. Their findings and advice are embodied in the following reports published as Sessional Papers Nos. 1/1943 and 2/1943 respectively:—

“Report on Swamp Reclamation and the Improvement of Existing Rice Lands by Drainage, Irrigation and Empoldering etc. in the Gambia.” by C. J. Rae, M. Eng., B. Eng. (Hons.) Assoc. M. Inst. C. E. (Irrigation and Drainage Engineer, Sierra Leone) and

“A Report of Rice Cultivation in the Gambia (with suggestions for development)” by G. M. Roddán, B.Sc., N.D.A., I.C.T.A. (Agricultural Officer, Sierra Leone.)

20. These reports are of the utmost value as a guide to future development and they form the bases for both short-term and long-term programmes of work.

21. Both reports stress the fact that the productivity of existing rice lands is capable of immediate improvement and one recommendation covers the introduction of improved seed.

22. In the past, distribution of improved seed has been limited by the small amount of such seed that could be grown on our own departmental farms. Distribution has now been intensified by the importation of seed from Sierra Leone and 300 bags of G. E. B. 24 were distributed in 1942 and 1,000 bags of Demerara Creole were ordered with a view to swamping certain selected areas in 1943. The superiority of these two varieties over the local types had already been proved at the Irrigation Area attached to our Yoroberi-kunda Experimental Farm and their popularity with the native farmer has been demonstrated through small scale distributions from that source.

23. *Dry Grains*.—Fundamental trials on guinea corn and millet, including spacing, rates and types of manuring etc., were continued at Yoroberi-kunda.

24. In a yield trial of local types of guinea corn, striking variations in susceptibility to *Striga* infection were noted.

25. *Pulses*.—Seed multiplication of pigeon pea and green gram and the investigation of the former as a 'productive fallow' were continued.

26. *Vegetable Production*.—The department has not engaged in the direct production of vegetables on a large scale. Rather, policy has been to step up production by encouraging the extension of village dry season garden areas and in this, considerable success has been attained.

27. Vegetable production is demonstrated at all departmental stations and dry season gardening takes a prominent place in the cropping of our Family Unit Demonstration Farms.

28. In addition to an increasing quantity of locally grown seed produced by the department at the Cape St. Mary Nurseries and at Bulok and Berending, free issues of some 200 lbs. of imported seed were made.

29. *Vegetable Seed Storage*.—A balance of imported seed and of locally grown seed remaining at the end of the dry season was stored successfully throughout the rains by placing the seed in bottles sealed with old crown corks which were then waxed. Representative germination percentages on opening were:—

Imported Chinese Cabbage	...	...	...	90.9%
Imported Carrot	...	...	...	59.9%
Local Cauliflower	...	...	...	82.2%

30. *Vegetable Marketing*.—The marketing of produce from new areas was assisted by the opening of a Government Stall in the Albert Market at

Bathurst. This Stall was managed by the Controller of Supplies and his staff and their active co-operation has been of the greatest assistance.

31. *Fruit Trees*.—Active propaganda was undertaken to increase the cultivation of pawpaws and bananas with their quick return of fruit. That the value of fruit is appreciated is shown by the fact that banana suckers were changing hands at 1/- each.

32. During the year, 8,938 fruit trees, including 6,713 seedling orange trees, were distributed from the Department's Nurseries at Cape St. Mary. The trees were issued to individuals for compound planting, this method ensuring better after care. Previous distributions for communal village plantations had shown a disappointingly low survival rate.

Local Industries.

33. *Soap Manufacture*.—Encouragement of soap-making has made satisfactory progress and is only limited by available supplies of palm oil and caustic soda. Development has taken place along two distinct lines; as a cottage industry with the maker turning out 12 to 15 lbs. of soap at a time for retailing in small tablets and larger production on a small factory basis. It is difficult to check and obtain figures for the former but the latter is now producing good quality soap as the following analyses of samples from two Syrian producers show:—

	(a)	(b)
Moisture per cent	12.06	13.92
Total alkali per cent	10.37	8.68
Free alkali per cent	0.13	0.12

These analyses were kindly carried out by the Gold Coast Department of Agriculture.

34. Producer (b) above turned out 10,600 lbs. of soap during the last three months of the period under review using a mixture of 60% groundnut oil and 40% palm oil.

35. Government imports caustic soda which is issued on cash repayment to approved applicants.

36. *Edible Oil*.—The local extraction of groundnut oil, red palm oil and palm kernel oil has shown further progress but self-sufficiency as regards edible oils has not yet been reached. The chief centre for the local production of groundnut oil is at Jowarra in the North Bank Province where the industry is being run in conjunction with soap manufacture. Syrians are the largest producers.

37. *Weaving Industry*.—Resulting from the shortage of imported cloth, there has been a marked increase in cotton growing for the local weaving industry. A small distribution of two tons of 'Allen' cotton seed from Nigeria was readily taken up and has proved popular both with the growers and the weavers.

Maintenance of Fertility and Animal Husbandry.

38. *Mixed Farming*.—Only small progress can be reported in the maintenance of fertility through mixed farming. The depressing factor is the problem of cattle disease and the problem is a serious one. The Gambia cattle are not immune to trypanosomiasis but they do show a high resistance. In practise however, this resistance soon breaks down if the vitality of the cattle is at all lowered be it through strenuous work, reaction to rinderpest immunisation or other causes. At the main experimental farm at Yoroberi-kunda, mixed farming with its utilisation of cattle for cultivation and for the production for pen manure is carried out with success but great care has to be taken to limit the amount of work undertaken by the cattle in order to maintain their condition and consequent resistance to trypanosomiasis. At the end of the period under review, an outbreak of bovine pleuro-pneumonia decimated the Yoroberi-kunda herd of working cattle. In recent years at any rate, this disease had not been recorded as assuming epidemic proportions and at the time of this outbreak, the Veterinary Department were not in a position to effect preventative inoculation.

39. Until therefore the farmer has been educated up to the need for careful cattle management and disease is controlled or eradicated, mixed farming extension can only make very slow progress. The education problem is being partly tackled by our Family Unit Demonstration Farms of which there are now seven established throughout the Protectorate. Mixed farming is the essential basis of these units.

40. By dint of propaganda and demonstration, progress has been made in the more extended use of manure from village refuse dumps and of compost from the few village sanitary units where the village sweepings and ash are composted with the effluent from septic tanks.

41. Milk recording of the small breeding herd at Yoroberi-kunda has been continued. Milk yields have shown some improvement but they are still low compared with other West African breeds. The two best yields *surplus* to requirements of the calf during the year were:—

Cow No.	Lactation	Yield	No. of days
15	5th	1,133 lbs.	294
17	8rd	1,177 lbs.	295

42. *Dairying Industry*.—This industry, commencing with the small scale manufacture of clarified butter fat mentioned in the last report, is being developed on the following lines:—

- (i) The manufacture of fresh butter with cream from the Farm Cattle and any local cattle which can be brought in for milking under supervision.
- (ii) The manufacture of clarified butter fat from cream from local herds, the milk being brought into the Farm Dairy for separation.
- (iii) The commercial purchase of locally 'cooked' butter as ghee.

43. Present production under all sections is on a small scale but as suspicion and conservatism is broken down and the confidence of the local herdowners is gained, development under (i) and (ii) is intended by the operation of mobile cream separating units at neighbouring cattle centres.

44. *Small Livestock.* Work on small livestock has been confined to the establishment of piggeries at Fajara and the running of a small flock of sheep at Yoroberi-kunda. An outbreak of disease, suspected to be Heart-water, occurred amongst the sheep during the rains when the tick population was high. Condition of the flock showed much improvement when medicated salt licks made up of Salt, Lime, Ferri Sulphate and Sulphur were made available.

45. *Piggeries.*—In June, 1942, twenty fully grown gilts were obtained through the Army Authorities from the French Cameroons. They were of mixed breed but mostly white in colouration. A black boar from the same source was obtained in August. In November, the pigs were moved to open-air piggeries on the banks of the Kotu Stream outside the building free zone at Fajara where they have continued to thrive.

46. In pursuance of the original purpose for the establishment of these piggeries, five in-pig sows, ten young boars and seven gilts had been distributed on sale to local pigkeepers by the end of the period under review.

47. A system of alternating the pig runs with dry and wet-season cropping is showing great promise.

Export Crops and Produce Inspection.

48. *Groundnuts.*—Apart from the continuance of investigation on varieties and on cultural methods, the main work has been in connection with the marketing of a clean and non-adulterated product and as a result the quality of the crop has been well maintained. This is largely due to the enforcement of Native Authority Orders which control the dates of harvesting and the compulsory stacking of the crop clear of the ground.

49. To assist increased production, a total of 171 tons of groundnut seed was distributed throughout the Protectorate in augmentation of communal village seed reserves.

50. *Cotton.*—Variety yield trials were continued but under the prevalent dry-zone conditions, it is doubtful if the comparatively poor yields obtainable will ever enable cotton to compete with groundnuts as an export crop. At Yoroberi-kunda, Allen and Cambodia were both superior to the mixed native types and yielded as follows:—

'Allen'.....238 lbs. seed cotton per acre.

'Cambodia'.....235 lbs. seed cotton per acre.

The above yields represent cotton grown under field conditions. Cotton for the local weaving industry mentioned in paragraph 37 above, is mostly grown as a compound crop and under such conditions of shelter and richer soil, higher yields are probably obtained.

Agricultural Education.

51. The shortage of trained African Staff as a limiting factor to departmental progress has been stressed and to help meet this shortage, the two schemes detailed in last year's report have continued in operation. At the Vocational Training School at Yoroberi-kunda, an average of six learners have been in training and two members of our staff have been absent on scholarship courses, one in Nigeria and one in Sierra Leone. Both schemes were financed by a free grant under the Colonial Development and Welfare Act.

52. The shortage is not only in trained staff but also in raw material as witness the fact that six posts for Agricultural Learners remained vacant throughout the year.

53. *Dry Season Produce Shows*.—The educative value of these shows continues to be proved and during this year, the fourth since their inception, a programme of seven shows was held throughout the Protectorate.

54. The shows were again run on the simplest lines and were confined to one day, the exhibits being brought in, classified and staged on the morning of the show. A total of 2,862 exhibits were staged by 1,471 exhibitors.

55. That the scope and value of these shows is widening is demonstrated by the increasing number of exhibits being shown under locally manufactured food products and under arts and crafts.

56. *Staff*.—The European Staff of the department consisted of:—

Mr. E. W. Leach	Senior Agricultural Superintendent
Mr. J. D. Tallantire	Agricultural Superintendent
Mr. L. H. Saunders	Agricultural Superintendent
Mr. J. Gordon	Agricultural Superintendent

Leave incidence enabled three members to be in the Colony throughout the year.

The Senior Agricultural Superintendent was also Food Controller up to June, 1942.

57. I wish to record my appreciation of the hard and willing work carried out by all members of my staff, both African and European, under the difficulties of war-time conditions.

SECTION III.

Omitted.

SECTION IV.

58. *Legislation*.—None directly affecting Agriculture was effected during the period under review.

31st December, 1943.

E. W. LEACH,
Senior Agricultural Superintendent.